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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/694,762	10/29/2003	Rentaro Kato	244555US3	5290

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EXAMINER

WILLIAMS, THOMAS J

ART UNIT	PAPER NUMBER
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3683

DATE MAILED: 09/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/694,762

Applicant(s)

KATO ET AL.

Examiner

Thomas J. Williams

Art Unit

3683

— The MAILING DATE of this communication appears on the cover sheet with the correspondence address —

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 July 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 6-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 6-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 7/13/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Acknowledgment is made in the receipt of the information disclosure statement filed July 13, 2004.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-3 and 6-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 3,731,896 to Fehlberg in view of Inoue et al. (as disclosed by the applicant and in "First in the World, Development of New Material").

Re-claims 1-3 and 7-10, Fehlberg teaches a shock absorber, comprising: a housing 33 having a hollow interior, formed of a rigid material, fixed to a bone structural member of a vehicle: a shock absorbing member 46/48 is disposed in the hollow portion of the housing; the shock absorbing member has a surface facing a shock input direction and contacts an inner

Art Unit: 3683

surface of the housing, and the member is pre-compressed in a shock input direction within the housing, see column 1 lines 36-39. However, Fehlberg fails to teach the use of a super plastic polymer having the recited performance features of a tensile braking elongation of more than 250%, a yield strength of more than 25 MPa, or a tensile elastic modulus of more than 500 MPa, with the capability to absorb energies in the amount of 2.5 times that of polyurethane foam.

Inoue et al. teaches super plastic polymer having the recited performance features, as disclosed by the applicant. It would have been obvious to one of ordinary skill in the art to have provided the shock absorber structure of Fehlberg with the super plastic polymer taught by Inoue et al., thus greatly improving the performance characteristics of the mount assembly.

Re-claim 6, Fehlberg is silent regarding the dimensions of the housing, specifically having a thickness of 2mm or less. It would have been obvious to one of ordinary skill in the art as a matter of design choice when having chosen a thickness for the housing of 2 mm or less, since applicant has not disclosed that having the housing with this thickness solves any stated problem or is for any particular purpose, and it appears that the housing of Fehlberg would have performed equally well with a thickness of 2mm or less, furthermore, minimizing the thickness of the housing would have minimized both the weight and size of the mount structure.

Response to Arguments

5. Applicant's arguments with respect to claims 1-10 have been considered but are moot in view of the new ground(s) of rejection. It is the opinion of the examiner that the super plastic polymer of Inoue et al. (specifically ASUWAN) will have the recited properties. It appears that the applicant merely tested the material and recorded their results. As such it seems that the performance characteristics are in fact inherent. It is unclear from the disclosure if in fact the

Art Unit: 3683

applicant's have somehow improved the material, and if so by what means. The arguments regarding the difficulty in using of the super plastic polymer in a shock absorbing structure is not convincing. It is well known in the art to substitute rubber or natural elastomers with synthetic elastomers or polymers. Furthermore, Inoue et al. teaches in the cited document that the super plastic material possesses "remarkable shock resistance" (see page 2 paragraph 2). This would provide one of ordinary skill in the art the motivation for using the super plastic polymer in shock absorbing structures.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. JP 2003-213112 and JP 2003-221498 disclose a shock resistant plastic.

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Art Unit: 3683

8. Any inquiries concerning this communication or earlier communications from the examiner should be directed to Thomas Williams whose telephone number is (703) 305-1346. The examiner can normally be reached on Monday-Thursday from 6:30 AM to 4:00 PM. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Lavinder, can be reached at (703) 308-3421. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.

TJW

September 17, 2004

THOMAS WILLIAMS
PATENT EXAMINER

Thomas Williams

AU 3683

9-17-04